

## CLAIMS

What is claimed is:

1. An insulated duct assembly comprising:
  - 5 an elongated air duct;
  - an insulation blanket having a inner wicking layer which is in direct contact with said air duct surface, the insulation blanket being applied to the elongated duct, wherein a portion of said inner wicking layer extends into the interior of the duct thereby being exposed to air flowing through the interior of the duct.
- 10 2. The insulated duct assembly of claim 1, wherein said portion of said inner wicking layer extends into the interior of said duct through a joint in a first section of said elongated air duct and a joint in a second section of said elongated air duct.
- 15 3. The insulated duct assembly of claim 2, wherein said joints of said duct are zippered joints.
- 20 4. The insulated duct assembly of claim 1, wherein said portion of said inner wicking layer extends into the interior of said duct through a joint in said elongated air duct and a joint in a second elongated air duct.
5. The insulated duct assembly of claim 1, wherein said elongated duct extends longitudinally.
- 25 6. The insulated duct assembly of claim 5, wherein said portion of said inner wicking layer extends into the interior of said duct longitudinally along said duct.

7. The insulated duct assembly of claim 5, wherein said portion of said inner wicking layer extends into the interior of said duct perpendicular to the duct.
8. The insulated duct assembly of claim 1 wherein said inner wicking layer  
5 extends through said air duct in intervals of about four feet.
9. The insulated duct assembly of claim 1 wherein the insulation blanket further comprises an outer kraft layer.
10. The insulated duct assembly of claim 1 wherein the insulation blanket further  
comprises an outer foil surface.
11. The insulated duct assembly of claim 1 wherein the insulation blanket further  
comprises a facing material having vapor retarding properties
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12. The insulated duct assembly of claim 11 wherein said facing material comprises a polymeric facing material.
13. The insulated duct assembly of claim 11 wherein said facing material comprises a  
20 composite facing material.
14. The insulated duct assembly of claim 1 wherein said duct is constructed of metal.
15. An insulated duct assembly comprising:  
25           an elongated air duct;  
              an insulation blanket having a inner wicking layer which is in direct contact  
with said air duct surface, the insulation blanket being applied to the elongated duct,

wherein a portion of said inner wicking layer extends through said insulation blanket to the exterior surface of said insulation blanket.

16. The insulated duct assembly of claim 15 wherein said portion of said inner  
5 wicking layer extends through said insulation blanket to the exterior surface of said insulation blanket in intervals of about four feet.

17. The insulated duct assembly of claim 15, wherein the insulation blanket further comprises an outer kraft layer.

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18. The insulated duct assembly of claim 17, wherein the insulation blanket further comprises an outer foil surface.

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19. The insulated duct assembly of claim 18, wherein said portion of said inner wicking layers is affixed to said outer foil surface.

20. The insulated duct assembly of claim 15 wherein the insulation blanket further comprises a facing material having vapor retarding properties

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21. The insulated duct assembly of claim 20 wherein said facing material comprises a polymeric facing material.

22. The insulated duct assembly of claim 20 wherein said facing material comprises a composite facing material.

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23. The insulated duct assembly of claim 15, wherein said duct is constructed of metal.

24. The insulated duct assembly of claim 15, wherein said portion of said inner wicking layer is affixed to said exterior surface of said insulation blanket.

25. An insulated duct assembly comprising:

5           an elongated air duct;

              an insulation blanket having a inner wicking layer which is in direct contact with said air duct surface, the insulation blanket being applied to the elongated duct, wherein a first portion of said inner wicking layer extends through said insulation blanket to the exterior surface of said insulation blanket;

10           wherein a second portion of said inner wicking layer extends into the interior of the duct thereby being exposed to air flowing through the interior of the duct.

26. The insulated duct assembly of claim 25 wherein said first portion of said inner wicking layer extends through extends through said insulation blanket to the 15 exterior surface of said insulation blanket in intervals of about four feet.

27. The insulated duct assembly of claim 25 wherein said second portion of said inner wicking layer extends through said joints of said air duct in intervals of about four feet.

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28. The insulated duct assembly of claim 25 wherein the insulation blanket further comprises a facing material having vapor retarding properties

29. The insulated duct assembly of claim 28 wherein said facing material comprises a 25 polymeric facing material.

30. The insulated duct assembly of claim 28 wherein said facing material comprises a composite facing material.

31. The insulated duct assembly of claim 25, wherein the insulation blanket further comprises an outer kraft layer.
  - 5    32. The insulated duct assembly of claim 25, wherein the insulation blanket further comprises an outer foil surface.
  33. The insulated duct assembly of claim 32, wherein said portion of said inner wicking layers is affixed to said outer foil surface.
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34. The insulated duct assembly of claim 25, wherein said duct is constructed of metal.
  35. The insulated duct assembly of claim 25, wherein said first portion of said inner wicking layer is affixed to said exterior surface of said insulation blanket.

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